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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,411	05/24/2006	Masanori Masuda	DK-US065115	2087
22919	7590	08/08/2007		
GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			EXAMINER TRIEU, THERESA	
			ART UNIT 3748	PAPER NUMBER
			MAIL DATE 08/08/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,411

Applicant(s)

MASUDA ET AL.

Examiner

Theresa Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date May 24, 2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Receipt and entry of Applicants' Preliminary Amendment filed on May 24, 2006 is acknowledged.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2 and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Barito et al. (Barito) (Patent Number 6,736,621).

Regarding claims 1 and 2, as shown in Figs. 1 and 4, Barito discloses a scroll fluid machine comprising: at least one first scroll 24 having a spiral wrap 30 formed on an end plate 32; at least one second scroll 22 having a spiral wrap 26 formed on an end plate 28; and an adjustment member 35, 40, 102 provided to adjust an amount of a space between the wrap of one of the first and second scrolls and the end plate of the other one of the first and second scrolls,

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the adjustment member including a deformable element 35, 40, 102 which changes shape according to external input; wherein the deformable element 35, 40, 102 being formed at a tip of at least one of the wraps and changing shape along a height of the wrap to adjust the amount of the space.

Regarding claims 5-9, Barito discloses the deformable element 35, 40, 102 adjusts the amount of the space to vary a capacity; the deformable element 35, 40, 102 adjusting the amount of the space to vary an angle of rotation at which fluid discharge begins; a working chamber being defined between the first and the second scrolls 24, 22 and a discharge port 37 for discharging fluid from the working chamber is provided with a discharge valve, and the wrap is configured such that a capacity of the working chamber becomes substantially zero after discharging fluid is terminated; the deformable element 35, 40, 102 being provided at a tip of at least one of the wraps and also functions as a seal between the end plate and the wrap; the deformable element 35, 40, 102 being disposed in a recess formed at a tip of at least one of the wraps, and the recess is formed such that a wall of the recess including an inner circumference surface of the wrap has a thickness different from that of a wall of the recess including an outer circumference surface of the wrap.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barito in view of legal precedent.

Regarding claim 3, Barito discloses the invention as recited above; however, Barito fails to disclose the deformable element changing length along the spiral of the wrap. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the deformable element changes length along the spiral of the wrap to adjust the amount of the space, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 289 (CCPA 1954).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barito in view of legal precedent.

Regarding claim 4, Barito discloses the invention as recited above; however, Barito fails to disclose two or more deformable elements are formed along the spiral of the wrap. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized two or more deformable elements, since it has been held that mere duplication of

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the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (see MPEP §2144.04).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barito in view of McCullough (Patent Number 3,994,635).

Barito discloses the invention as recited above; however, Barito fails to disclose the deformable element being made of a polymer actuator.

McCullough teaches that it is conventional in the art to utilize a polymer actuator deformable element 82. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the polymer actuator deformable element 82, as taught by in the Barito apparatus, since the use thereof would have improved the sealing and prevent the leakage under the wrap.

Allowable Subject Matter

7. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

8. The IDS (PTO-1449) filed on May 24, 2006 has been considered. An initialized copy is attached hereto.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents: McCullough (U.S. Patent Number 4,395,205), Clarke et al. (U.S. Patent Number 6,068,459), Suefuji et al. (Publication Number JP 57-068580), and Hayano et al. (Publication Number JP 63-223379), each further discloses a state of the art.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT
August 1, 2007



Theresa Trieu
Primary Examiner
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